

REMARKS

The Office Action dated February 1, 2008 has been received and carefully noted. The above amendments to the specification and claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-2 and 4-12 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claim 3 was previously cancelled without prejudice or disclaimer. No new matter has been added. Therefore, claims 1-2 and 4-12 are currently pending in the application and are respectfully submitted for consideration.

The Office Action objected to the disclosure because of a minor informalities. Specifically, the Office Action alleged that the use of acronyms was inconsistent throughout the specification, citing multiple examples in the specification. The Office Action further stated that the specification should use reference characters to the drawings, instead of acronyms. (see Office Action at page 2).

Accordingly, Applicants have amended the disclosure to: (1) replace the term “network entity” with “network element;” (2) replace the term “terminal” with “user equipment” in the “Detailed Description of the Embodiments” section; (3) replace the term “account server” with “accounting server;” (4) refer to the user equipment, network element, and accounting server illustrated in Figure 1 as “UE,” “NE,” and “Accounting Server,” respectively (e.g. the user equipment UE, etc.) when describing the embodiment

illustrated in Figure 1; and (5) to define all acronyms in their first usage in the specification (e.g. “Accounting-Request (ACR)”).

Applicants respectfully submit that such amendments address the Office Action’s objections to the disclosure of the specification, and renders them moot. Therefore, Applicants respectfully request withdrawal of the objections to the disclosure of the specification.

The Office Action objected to claims 1 and 9-12 because of minor informalities. Specifically, the Office Action stated that claim 1 should use “numbers or letters with the ‘indications’ (e.g. ‘(a) a credit...(b) an amount ... (c) a source ...’.” The Office Action further stated that Applicants should “omit ‘of the deposit’ after ‘said source’ in the requesting step because ‘deposit’ and ‘credit’ are already used in abundance.” The Office Action further stated that “‘Diameter Protocol’ lacks antecedent basis.” The Office Action stated that, with respect to claims 9 and 11, “Applicant may wish to include ‘network element’ in the body of the [c]laim [because] Applicant does not refer back to the preamble.” Finally, the Office Action stated that, with respect to claims 10 and 12, “Applicant may wish to include “account server” in the body of the [c]laim [because] Applicant does not refer back to the preamble. (see Office Action at page 3).

With respect to the objection to claim 1, Applicants respectfully submit that claim 1 has been amended to use an indicator (e.g. (a), (b), etc.). Applicants respectfully submit that this amendment moots the Office Action’s objection to claim 1.

With respect to the objections to claims 9-12, Applicants respectfully traverse these objections for the following reasons. Applicants respectfully submit that that there is no requirement in the MPEP, or U.S. patent practice, that a claim refer back to its preamble. Furthermore, Applicants respectfully submit that claims 9-12 have been amended to delete the reference to “network element,” and “account server,” respectively, and thus, the objection is moot.

Therefore, with the objections being either moot or traversed, Applicants respectfully request withdrawal of the objections to claims 1 and 9-12, and respectfully submit that claims 1 and 9-12 are now in condition for allowance.

The Office Action rejected claims 9-12 under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. Specifically, the Office Action alleged, with respect to claims 9 and 11, that “Applicant never discusses ‘an interaction unit’ or a ‘requesting unit’ nor explains an ‘interaction means for’ or a ‘requesting means for’ in his/her original disclosure.” Furthermore, the Office Action alleged, with respect to claims 10 and 12, that “Applicant never discusses a ‘receiving unit’ or a ‘depositing unit,’ nor explain a ‘receiving means for’ or a ‘depositing means for’ in his/her original disclosure.” (see Office Action at pages 3-4). This rejection is respectfully traversed for the following reasons.

With respect to claims 9 and 11, Applicants respectfully submit that that claims 9 and 11 have been amended so that claim 9 recites “a receiver,” “a depositing unit,” “an interaction unit,” and “a requesting unit;”; and claim 11 recites “receiving means,”

“depositing means,” “interaction means,” and “requesting means.” Applicants further submit that the original disclosure of the present application disclosed a network element which interacts with a user terminal, requests an accounting server to deposit an amount of credit to an account associated to the user terminal, receives an acknowledgement of the request, and deposits the amount of credit on the account associated to the user terminal. (see Specification at page 6, line 31 – 7, line 11; page 8, lines 7-14). Therefore, Applicants respectfully submit that, inherent in the original disclosure, is the required structure to perform said functions, which would have been known to one of ordinary skill in the art, at the time the invention was made.

Furthermore, with respect to claims 10 and 12, Applicants respectfully submit that claims 10 and 12 have been amended so that claim 10 recites “a receiver,” and “an acknowledging unit;” and claim 12 recites “receiving means,” and “acknowledging means.” Applicants further submit that the original disclosure of the present application disclosed an accounting server which receives a message from a network element, and returns an acknowledgement to the network element. (see Specification at page 9, line 30 – page 10, line 17). Therefore, Applicants respectfully submit that, inherent in the original disclosure, is the required structure to perform said functions, which would have been known to one of ordinary skill in the art, at the time the invention was made.

For at least the reasons discussed above, Applicants respectfully request withdrawal of the rejection of claims 9-12, and respectfully submit that claims 9-12 are now in condition for allowance.

The Office Action rejected claims 1, 2, 4-9, and 11 under 35 U.S.C. §112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

With respect to claim 1, the Office Action alleged that “Applicant mixes the use of ‘credit’ and ‘deposit.’” The Office Action further alleged that “Applicant introduces the Diameter protocol after a requesting step,” and stated that the “Examiner is concerned with the language chosen and suggests the use of alternative terms for ‘request’ if different terms are intended.” Furthermore, the Office Action alleged that the use of “an amount” and “an account” is indefinite, alleging that it is unclear which amount and account is being referred to. Finally, the Office Action suggested that “Applicant state a ‘first attribute value pair’ in view of claim 4. (see Office Action at pages 4-5). Applicants respectfully submit that claim 1 has been amended to change the phrase “source of the deposit,” to “source of the credit,” and “said source” in subsequent uses of the phrase. Applicants further submit that claim 1 has also been amended to correct for lack of antecedent basis. Therefore, the rejection of claim 1 is rendered moot, and Applicants respectfully request that the rejection be withdrawn.

With respect to claim 2, the Office Action alleged that the term “value-added” is a relative term which renders the claim indefinite, because “the term ‘value-added’ is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.” (see Office Action at page 5). Applicants respectfully

submit that claim 2 has been amended to delete the phrase “value-added” from the claim. Therefore, the rejection of claim 2 is rendered moot, and Applicants respectfully request that the rejection be withdrawn.

With respect to claims 4 and 5, the Office Action suggested the use of “second attribute value pair,” and “third attribute value pair,” to “avoid ambiguity in view of [c]laim 1.” Furthermore, with respect to claim 4, the Office Action alleged that “Applicant’s mixing of ‘credit’ and ‘deposit’ as ‘amount of credit’ has support in [c]laim 1 and ‘amount of said deposit’ does not.” (see Office Action at page 5). Applicants respectfully submit that claim 4 has been amended to recite “a second attribute value pair,” “a third attribute value pair,” “said source,” and “the amount.” Applicants further submit that claim 5 has been amended to refer to “said second attribute value pair.” Therefore, the rejection of claims 4 and 5 is rendered moot, and Applicants respectfully request that the rejection be withdrawn.

With respect to claims 6 and 7, the Office Action alleged that the terms “successful” and “success” are relative term which renders the claim indefinite, because “[the terms are] not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.” (see Office Action at page 5-6). Applicants respectfully submit that claims 6 and 7 have been amended to delete the terms “successful,” and “success.” Therefore, the rejection of claims 6 and 7 is rendered moot, and Applicants respectfully request that the rejection be withdrawn.

With respect to claim 8, the Office Action “questions whether ‘the amount being deposited’ is equal to the amount requested.” Furthermore, the Office Action alleged that “an account” should be “said account.” (see Office Action at page 6). Applicants respectfully submit that claim 8 has been amended to change “being deposited” to “deposited,” and to change “an account” to “said account.” Applicants further submit that the use of the term “the amount” in claim 8 makes clear that it is the same “amount” referred to in claim 7, where the amount is deposited, and the same “amount” referred to in claim 1, where the request for the amount is made. Therefore, Applicants submit that the amendment moots the rejection, and Applicants respectfully request that the rejection be withdrawn.

With respect to claims 9 and 11, the Office Action “is concerned that Applicant does not define a ‘network element,’” and “suggests that Applicant clarify the record.” (see Office Action at page 6). Applicants respectfully submit that claims 9 and 11 have amended to delete the reference to “network element.” Therefore, the rejection of claims 9 and 11 is rendered moot, and Applicants respectfully request that the rejection be withdrawn.

For at least the reasons discussed above, Applicants respectfully request withdrawal of the rejection of claims 1, 2, 4-9, and 11, and respectfully submit that claims 9-12 are now in condition for allowance.

The Office Action rejected claims 1, 4, and 6-12 under 35 U.S.C. §103(a) as being allegedly unpatentable as obvious over Hilt, *et al.* (U.S. Patent No. 5,465,203) (“Hilt”) in

view of Tsuda (U.S. Patent Publication No. 2002/0065785) (“Tsuda”). The Office Action took the position that Hilt discloses all the elements of the claims with the exception of certain elements of the claims (for example, “wherein said requesting is based on the DIAMETER protocol,” as recited in claim 1). The Office Action then cited Tsuda as allegedly curing the deficiencies of Hilt. The rejection is respectfully traversed for at least the following reasons.

Claim 1, upon which claims 2 and 4-8 are dependent, recites a method which includes interacting with a user terminal subscribed to a communication network. The interacting yields an indication of at least whether a credit is to be deposited on an account associated to said user terminal, an amount of credit to be deposited, and a source of the credit. The method further includes sending a request to said source to deposit said amount on said account. The sending a request is based on a DIAMETER protocol. The sending a request comprises generating a DIAMETER request message identifying the request as a request for depositing the amount to the account. The generated DIAMETER request message further comprises a first attribute value pair identifying the user terminal to the account.

Claim 9 recites an apparatus which includes an interaction unit configured to interact with a user terminal subscribed to a communication network. The interaction unit is further configured to yield an indication of at least whether a credit is to be deposited on an account associated to said user terminal, an amount of credit to be deposited, and a source of the credit. The apparatus further includes a requesting unit

configured to send a request to said source to deposit said amount on said account. The request is based on the DIAMETER protocol. The requesting unit is further configured to generate a DIAMETER request message identifying the request as a request for depositing the amount to the account. The generated DIAMETER request message further comprises an attribute value pair identifying the user terminal to the account. The apparatus further includes a receiver configured to receive an acknowledgement of said request, and a depositing unit configured to deposit the amount to the account.

Claim 10 recites an apparatus which includes a receiver configured to receive a request message from a network element to deposit an amount of credit to an account associated to a user terminal subscribed to a communication network. The request message is based on a DIAMETER protocol. The DIAMETER request message identifies the request as a request for depositing the amount to the account. The received DIAMETER request message further comprises an attribute value pair identifying the user terminal to the account. The apparatus further includes an acknowledging unit configured to return an acknowledgment to the network element, wherein the acknowledgement is based on the DIAMETER protocol.

Claim 11 recites an apparatus which includes interaction means for interacting with a user terminal subscribed to a communication network. The interacting yields an indication of at least whether a credit is to be deposited on an account associated to said user terminal, an amount of credit to be deposited, and a source of the credit. The apparatus further includes requesting means for sending a request to said source to

deposit said amount on said account. The request is based on a DIAMETER protocol. The sending a request comprises generating a DIAMETER request message identifying the request as a request for depositing an amount to an account. The generated DIAMETER request message further comprises an attribute value pair identifying the user terminal to the account. The apparatus further includes receiving means for receiving an acknowledgement of said request, and depositing means for depositing the amount to the account.

Claim 12 recites an apparatus, which includes receiving means for receiving a request message from a network element to deposit an amount of credit to an account associated to a user terminal subscribed to a communication network. The request message is based on a DIAMETER protocol. The DIAMETER request message identifies the request as a request for depositing the amount to the account. The received DIAMETER request message further comprises an attribute value pair identifying the user terminal to the account. The apparatus further includes acknowledging means for returning an acknowledgment to the network element, wherein the acknowledgement is based on the DIAMETER protocol.

Thus, according to embodiments of the invention, the DIAMETER protocol can be adopted for online charging purposes. Therefore, online charging is provided for without involving a third party, such as an independent vendor.

As will be discussed below, the combination of Hilt and Tsuda fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the advantages and features discussed above.

Hilt generally discloses a bill pay system where participating consumers pay bills to participating billers through a payment network operating according to preset rules. The participating consumers receive bills from participating billers which indicate an amount, and a unique biller identification number. To authorize a remittance, a consumer transmits to a participating bank a bill pay order indicating a payment date, a payment amount, the consumer's account number with the biller, a source of funds, and the biller's identification number. The bank then submits a payment message to a payment network, and the payment network forwards the payment message to the biller's bank. The consumer's bank debits the consumer's account and is obligated to a net position with the payment network. The biller's bank receives a net position from the payment network and credits the biller's bank account. (see Hilt at Abstract).

Tsuda generally discloses, in a mobile communication system, a mobile node device according to Mobile IP protocol which transmits an authentication and accounting request for requesting a desired accounting service at an home Authentication, Authorization, and Accounting server ("AAA server") device according to a prescribed AAA protocol which is provided at a home network of the mobile node device. The AAA server device carries out processing for providing the desired accounting service according to the authentication and accounting request.

Applicants respectfully submit that Hilt and Tsuda, whether considered individually or in combination, fail to disclose, teach, or suggest, all of the elements of the present claims. For example, the combination of Hilt and Tsuda fails to disclose, teach, or suggest, at least, “interacting with a user terminal subscribed to a communication network, wherein said interacting yields an indication of at least (a) whether a credit is to be deposited on an account associated to said user terminal, (b) an amount of credit to be deposited, and (c) a source of the credit,” as recited in claim 1, and similarly recited in claims 9 and 11; “a receiver configured to receiver a request message from a network element,” as recited in claim 10, and similarly recited in claim 12; and “wherein said sending a request is based on a DIAMETER protocol,” “wherein said sending a request comprises generating a DIAMETER request message identifying the request as a request for depositing the amount to the account,” and “wherein said generated DIAMETER request message further comprises a first attribute value pair identifying the user terminal to the account,” as recited in claim 1, and similarly recited in claims 9-12.

With respect to interacting with a user terminal, as described above, Hilt discloses a bill pay system wherein participating consumers pay bills to participating billers through a payment network. Specifically, once a consumer receives a bill from a participating biller (such as a paper bill through postal mail, or an e-mail notice), the consumer transmits to a participating bank (i.e. the client’s bank) a bill pay order, where the bill play order includes a payment date, a payment amount, the consumer’s account

number with the biller, a source of funds, and the biller's biller identification number. The client's bank then sends a payment message to the payment network, and the payment network forwards the message to the biller's bank. The consumer's bank debits the consumer's amount according to the payment amount, and the biller's bank credits the biller's bank account according to the payment amount. (see Hilt at Abstract). Thus, Hilt discloses a payment of bills between a consumer and a biller.

Applicants respectfully submit that the underlying method and the signaling involved with embodiments of the invention are each clearly different as compared to Hilt. Specifically, according to embodiments of the invention, an interaction takes place between a terminal (i.e. consumer or biller) and a network element (such as an application server.) In contrast, according to Hilt, the transaction to be credited (or debited) takes place between two terminals (i.e. the consumer and the biller). Stated another way, according to Hilt, in a transaction between two terminals, a bill is settled, whereas, according to embodiments of the present invention, a credit to be deposited is generated in an interaction between a terminal and a network element. Applicants further submit that the signaling between two terminals, and the signaling between a terminal and a network element is distinct, and cannot be treated as analogous, despite the Office Action's interpretation of the present claims.

Furthermore, as Hilt fails to disclose a network element interacting with a terminal, because Hilt discloses a first terminal interacting with a second terminal, Applicants further submit that Hilt fails to disclose a receiver configured to receive a

request message from a network element. As discussed above, Hilt merely discloses receiving messages from a terminal. (see Abstract). Therefore, Hilt fails to disclose, or suggest, “interacting with a user terminal subscribed to a communication network, wherein said interacting yields an indication of at least (a) whether a credit is to be deposited on an account associated to said user terminal, (b) an amount of credit to be deposited, and (c) a source of the credit,” as recited in claim 1, and similarly recited in claims 9 and 11; and “a receiver configured to receiver a request message from a network element,” as recited in claim 10, and similarly recited in claim 12.

With respect to a request message being based on a DIAMETER protocol, the Office Action correctly concludes that Hilt fails to disclose, or suggest, “wherein said sending a request is based on a DIAMETER protocol,” “wherein said sending a request comprises generating a DIAMETER request message identifying the request as a request for depositing the amount to the account,” and “wherein said generated DIAMETER request message further comprises a first attribute value pair identifying the user terminal to the account,” as recited in claim 1, and similarly recited in claims 9-12. (see Office Action at pages 8-10, 12-15). Therefore, Hilt fails to disclose, or suggest, “wherein said sending a request is based on a DIAMETER protocol,” “wherein said sending a request comprises generating a DIAMETER request message identifying the request as a request for depositing the amount to the account,” and “wherein said generated DIAMETER request message further comprises a first attribute value pair identifying the user terminal to the account,” as recited in claim 1, and similarly recited in claims 9-12.

Furthermore, Tsuda does not cure the deficiencies of Hilt. As described above, Tsuda discloses an authentication and accounting system in a mobile communication system. Furthermore, Tsuda discloses that the authentication and accounting system adopts a DIAMETER protocol as the AAA protocol. (see Tsuda at paragraph 0004). However, Applicants respectfully submit that since Tsuda was published in May 2002, it relies on the DIAMETER protocol as established at the priority date of Tsuda (i.e. November 28, 2000).

With respect to interacting with a user terminal, Applicants respectfully submit that Tsuda, like Hilt, does not disclose a situation where an interaction with a user terminal occurs, where the interaction yields an indication of at least whether a credit is to be deposited on said account associated to the user terminal. Therefore, Hilt fails to disclose, or suggest, “interacting with a user terminal subscribed to a communication network, wherein said interacting yields an indication of at least (a) whether a credit is to be deposited on an account associated to said user terminal, (b) an amount of credit to be deposited, and (c) a source of the credit,” as recited in claim 1, and similarly recited in claims 9 and 11; and “a receiver configured to receiver a request message from a network element,” as recited in claim 10, and similarly recited in claim 12.

With respect to a request message being based on a DIAMETER protocol, Applicants respectfully submit that, as discussed above, the AAA protocol disclosed in Tsuda is based on the version of the DIAMETER protocol as established by November 28, 2000. Accordingly, the AAA protocol used in Tsuda does not contain any of the new

features of a modified version of the DIAMETER protocol introduced after November 28, 2000.

In contrast, according to embodiments of the present invention, the following features are added to a modified version of the DIAMETER protocol: (1) a DIAMETER request message is generated that identifies the request as a request for depositing an amount to an account; and (2) the generated DIAMETER request message further includes an attribute value pair identifying the user terminal to an associated account of which the deposit is to be deposited. (see Specification at page 3, lines 11-19). Such features are added to adopt the pre-existing DIAMETER protocol for purposes such as online charging, as well as providing other advantages. (see Specification at page 3, line 33 – page 4, line 19). Specifically, embodiments of the present invention rely on the proposed modification to the DIAMETER protocol and introduce a new DIAMETER request including a new indication of the request and a new attribute pair. (see Specification at page 5, line 18). By virtue of the proposed modifications to the DIAMETER protocol, no separate connections are necessary. (see Specification at page 10, line 31 – page 11, line 2). Applicants respectfully submit that this represents a clear technical advantage and effect used by exploiting an existing connection established under a certain protocol and by modifying that connection in terms of the signaling carried on that connection.

Tsuda fails to disclose such modifications to the DIAMETER protocol. Moreover, Tsuda does not even suggest modifying the DIAMETER protocol in this regard.

Namely, Tsuda discloses that it is an object of Tsuda to provide a mobile communication system using an authentication and accounting scheme according to a prescribed AAA protocol. Thus, Tsuda focuses on mobile node devices operating under pre-existing AAA service. Therefore, a person skilled in the art would not even be motivated refer to Tsuda when looking for a solution to the problem underlying embodiments of the present invention (i.e. how to modify the pre-existing DIAMETER protocol to provide features such as online charging). Furthermore, one of ordinary skill in the art would not be motivated by Tsuda to arrive at the present invention. As discussed above, Tsuda stipulates that prescribed AAA protocols are used. This implies that no modifications to those prescribed AAA protocols are possible, since otherwise compatibility of those protocols would be lost.

Therefore, Tsuda fails to disclose, or suggest, “wherein said sending a request is based on a DIAMETER protocol,” “wherein said sending a request comprises generating a DIAMETER request message identifying the request as a request for depositing the amount to the account,” and “wherein said generated DIAMETER request message further comprises a first attribute value pair identifying the user terminal to the account,” as recited in claim 1, and similarly recited in claims 9-12.

For at least the reasons discussed above, the combination of Hilt and Tsuda fails to disclose, teach, or suggest, all of the elements of claims 1 and 9-12. For the reasons stated above, Applicants respectfully request that this rejection be withdrawn.

Claims 4 and 6-8 depend upon claim 1. Thus, Applicants respectfully submit that claims 4 and 6-8 should be allowed for at least their dependence upon claim 1, and for the specific elements recited therein.

The Office Action rejected claim 2 under 35 U.S.C. §103(a) as being allegedly unpatentable as obvious over Hilt in view of Tsuda, and further in view of Tubinis (U.S. Patent Publication No. 2003/0014367) (“Tubinis”). The Office Action took the position that the combination of Hilt and Tsuda discloses all the elements of the claims with the exception of “said interacting is based on a value-added multimedia application run on a multimedia application server provided in said communication network.” The Office Action then cited Tubinis as allegedly curing the deficiencies of Hilt and Tsuda. (see Office Action at page 15). The rejection is respectfully traversed for at least the following reasons.

Tubinis generally discloses a communication network where a subscriber is enabled to top-up an account for a multimedia service provided on the communication network while the service is being provided. Real-time prepaid charging is applied to a multimedia service being provided to the subscriber. A count and a time period is determined from an account balance, and the number of information units exchanged during the service and the duration of the service are compared against the count and time period, respectively. (see Tubinis at Abstract).

Claim 2 depends upon claim 1. As discussed above, the combination of Hilt and Tsuda does not disclose, teach, or suggest all of the elements of claim 1. Furthermore,

Tubinis does not cure the deficiencies in Hilt and Tsuda, as Tubinis also does not disclose, teach, or suggest, at least, “interacting with a user terminal subscribed to a communication network, wherein said interacting yields an indication of at least (a) whether a credit is to be deposited on an account associated to said user terminal, (b) an amount of credit to be deposited, and (c) a source of the credit,” as recited in claim 1 and “wherein said sending a request is based on a DIAMETER protocol,” “wherein said sending a request comprises generating a DIAMETER request message identifying the request as a request for depositing the amount to the account,” and “wherein said generated DIAMETER request message further comprises a first attribute value pair identifying the user terminal to the account,” as recited in claim 1. Thus, the combination of Hilt, Tsuda, and Tubinis does not disclose, teach, or suggest all of the elements of claim 2. Additionally, claim 2 should be allowed for at least its dependence upon claim 1, and for the specific elements recited therein.

The Office Action rejected claim 5 under 35 U.S.C. §103(a) as being allegedly unpatentable as obvious over Hilt in view of Tsuda, and further in view of Official Notice. The Office Action took the position that the combination of Hilt and Tsuda discloses all the elements of the claims with the exception of “the DIAMETER request message is routed to said source based on said attribute value pair identifying said source of the deposit.” The Office Action further took the position that “it is old and well-established that banks have routing [sic] numbers often represented in MICR lines,” and that “it would have been obvious to one of ordinary skill in the art, at the time of

Applicant's invention to modify [Hilt] and [Tsuda] to include the routing of a request message via routing information associated with an attribute value pair which identifies the source of a deposit." (see Office Action at page 16). The rejection is respectfully traversed for at least the following reasons.

The descriptions of Hilt and Tsuda, as described above, are incorporated herein.

Claim 5 depends upon claim 1. As discussed above, the combination of Hilt and Tsuda does not disclose, teach, or suggest all of the elements of claim 1. Thus, the combination of Hilt and Tsuda does not disclose, teach, or suggest all of the elements of claim 5. Additionally, claim 5 should be allowed for at least its dependence upon claim 1, and for the specific elements recited therein.

For at least the reasons discussed above, Applicants respectfully submit that the cited prior art references fails to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1-2 and 4-12 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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